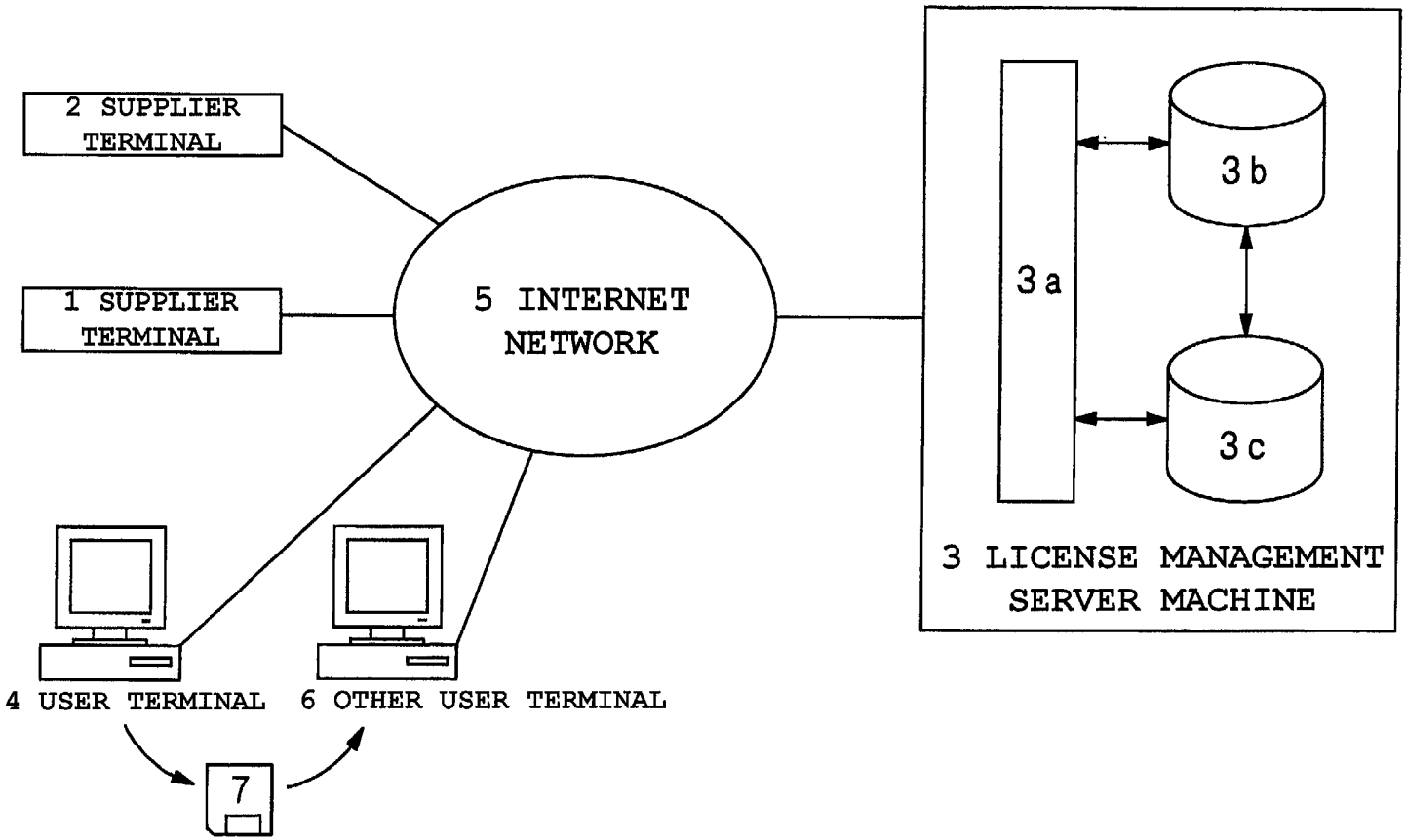

2 SUPPLIER TERMINAL
1 SUPPLIER TERMINAL
5 INTERNET NETWORK
3a
3b
3c
3 LICENSE MANAGEMENT SERVER MACHINE
4 USER TERMINAL
6 OTHER USER TERMINAL
7

Fig.1

USER ACCOUNT(UserAccount)								
USER ID (UserID)	USER DATA(UserInfo)					LICENSE DATA(License)		
	FIRST AND LAST NAME	ADDRESS	TELEPHONE NUMBER	E-MAIL ADDRESS	CHARGE INFORMATION	…ID	…BASE	…VALIDITY
1	.....	.....	.....	.....	.....	a-2	.....	.....
						d-1	.....	.....
2	.....	.....	.....	.....	.....	a-1	Fig.3	Fig.4
3	.....	.....	.....	.....	.....	c-1		
	.....	.....	.....	.....	.....	b-1		
	.....	.....	.....	.....	.....	e-1		

Fig.2

LICENSE DATA(License)		
APPLICATION ID (AppID)	LICENSE BASE (LicenseBase)	LICENSE VALIDITY (LicenseValidity)
a-2	.....	.....
d-1	.....	.....
a-1	Fig.3	Fig.4
c-1		
b-1		
e-1		

APPLICATION ID (AppID)	LICENSE BASE(LicenseBase)				
	DATE AND TIME LICENSE WAS OBTAINED	PASS ISSUANCE REGULATIONS			
		···REGULATION	···REGULATION	TEMPORARY PASS TERM/NUMBER OF TIMES	PASS TERM/NUMBER OF TIMES
a-1	.....			×	PERPETUAL
c-1	.....			TOTAL NUMBER OF SECONDS	CALENDAR PERIOD
b-1	.....			×	PERPETUAL
e-1	.....			×	TOTAL NUMBER OF TIMES=1 TIME

Fig.3

PASS ISSUANCE REGULATIONS	
REGULATIONS PERTINENT AT	REGULATIONS PERTINENT AT TIME OF UPDATING
PASS	ACCOUNT HAS BEEN SETTLED→UPDATE PASS
TEMPORARY PASS	CHARGE CANNOT BE MADE→REFUSE UPDATE
PASS	CHARGE CANNOT BE MADE→REFUSE UPDATE
PASS	ACCOUNT HAS BEEN SETTLED→UPDATE PASS

APPLICATION ID (AppID)	LICENSE VALIDITY(LicenseValidity)			
	REMAINING AMOUNT OF THE LICENSE		LICENSE STATUS	PASS STATUS
	FIELD 1	FIELD 2		
a-1			ACCOUNT HAS BEEN SETTLED	VALID
c-1			VALID	VALID
b-1			CHARGE CANNOT BE MADE	INVALID
e-1			VALID	VALID

REMAINING AMOUNT OF THE LICENSE	
FIELD 1	FIELD 2
×	×
START DATE AND TIME	END DATE AND TIME
×	×
REMAINING NUMBER OF TIMES=9 TIMES	×

Fig.4

APPLICATION ID (AppID)	LICENSE MENU (LicenseMenu)							
	LICENSE CONDITION NAME	LICENSE TERM/NUMBER OF TIMES	LICENSE CONSIDERATION	CHARGING METHOD	PASS ISSUANCE REGULATIONS			
					... REGULATIONS	... REGULATIONS	TEMPORARY PASS TERM/NUMBER OF TIMES	PASS TERM/NUMBER OF TIMES
a-1	FUNCTION	PERPETUAL	.....	.....			×	PERPETUAL
a-2	CONTENT	CALENDER PERIOD	.....	.....			CALENDAR TERM	CALENDAR PERIOD
b-1	IN ENTIRETY	PERPETUAL	.....	.....			×	PERPETUAL
c-1	IN ENTIRETY	PERPETUAL	.....	.....			×	PERPETUAL
c-1	IN ENTIRETY	CALENDER PERIOD	.....	.....			TOTAL NUMBER OF SECONDS	CALENDAR PERIOD
c-2	IN ENTIRETY	PERPETUAL	.....	.....			TOTAL NUMBER OF TIMES	PERPETUAL
d-1	FUNCTION	PERPETUAL	.....	.....			TOTAL NUMBER OF TIMES	PERPETUAL
e-1	IN ENTIRETY	TOTAL NUMBER OF TIMES=10 TIMES	.....	.....			×	TOTAL NUMBER OF TIMES=1 TIME

PASS ISSUANCE REGULATIONS	
REGULATIONS PERTINENT AT TIME OF PURCHASE	REGULATIONS PERTINENT AT TIME OF UPDATING
PASS	ACCOUNT HAS BEEN SETTLED→UPDATE PASS
TEMPORARY PASS	ACCOUNT HAS BEEN SETTLED→UPDATE PASS
PASS	CHARGE CANNOT BE MADE→REFUSE UPDATE
PASS	ACCOUNT HAS BEEN SETTLED→UPDATE PASS
TEMPORARY PASS	CHARGE CANNOT BE MADE→REFUSE UPDATE
TEMPORARY PASS	CHARGE CANNOT BE MADE→REFUSE UPDATE
TEMPORARY PASS	ACCOUNT HAS BEEN SETTLED→UPDATE PASS
PASS	ACCOUNT HAS BEEN SETTLED→UPDATE PASS

Fig.5

Fig.6

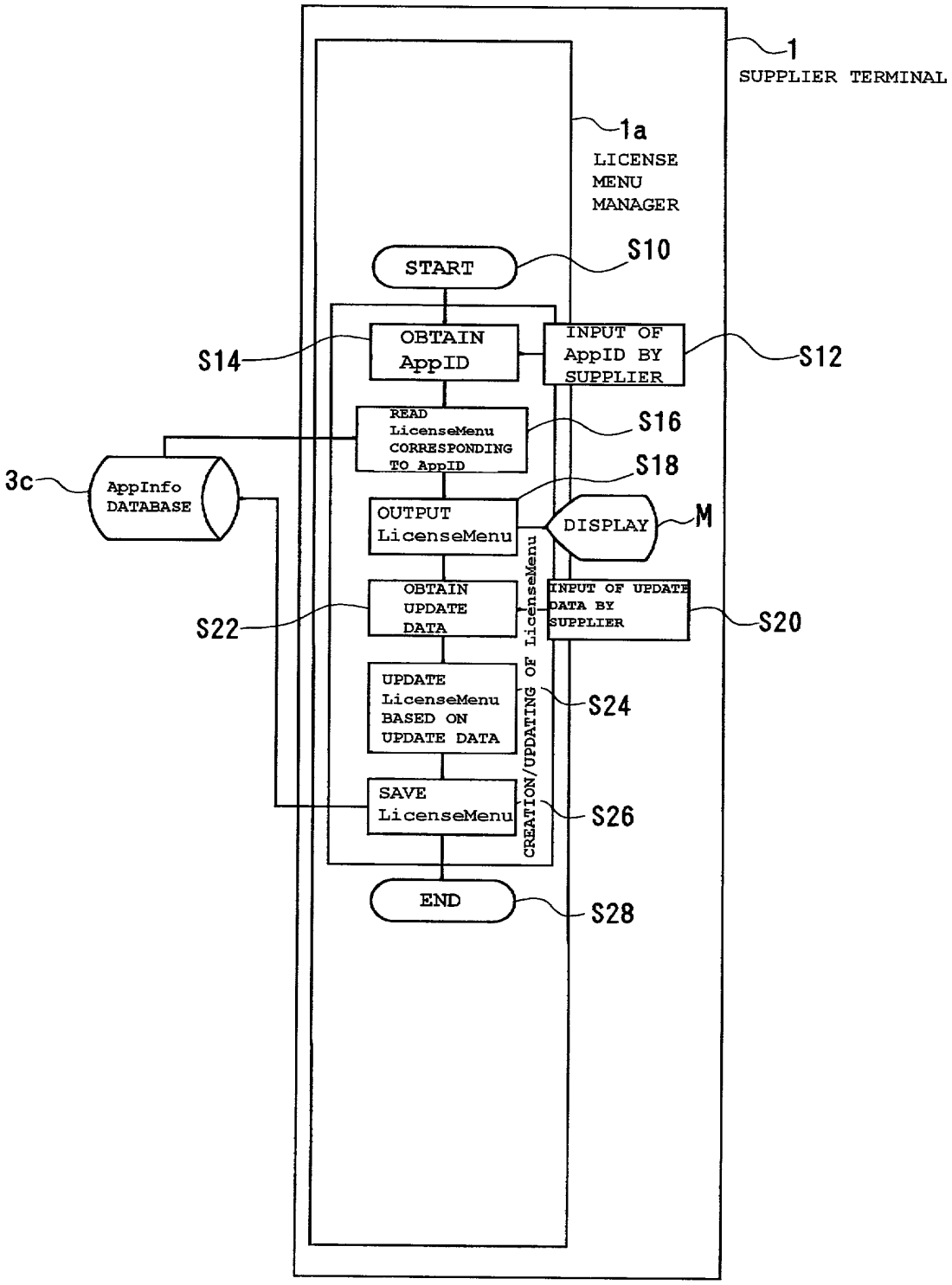
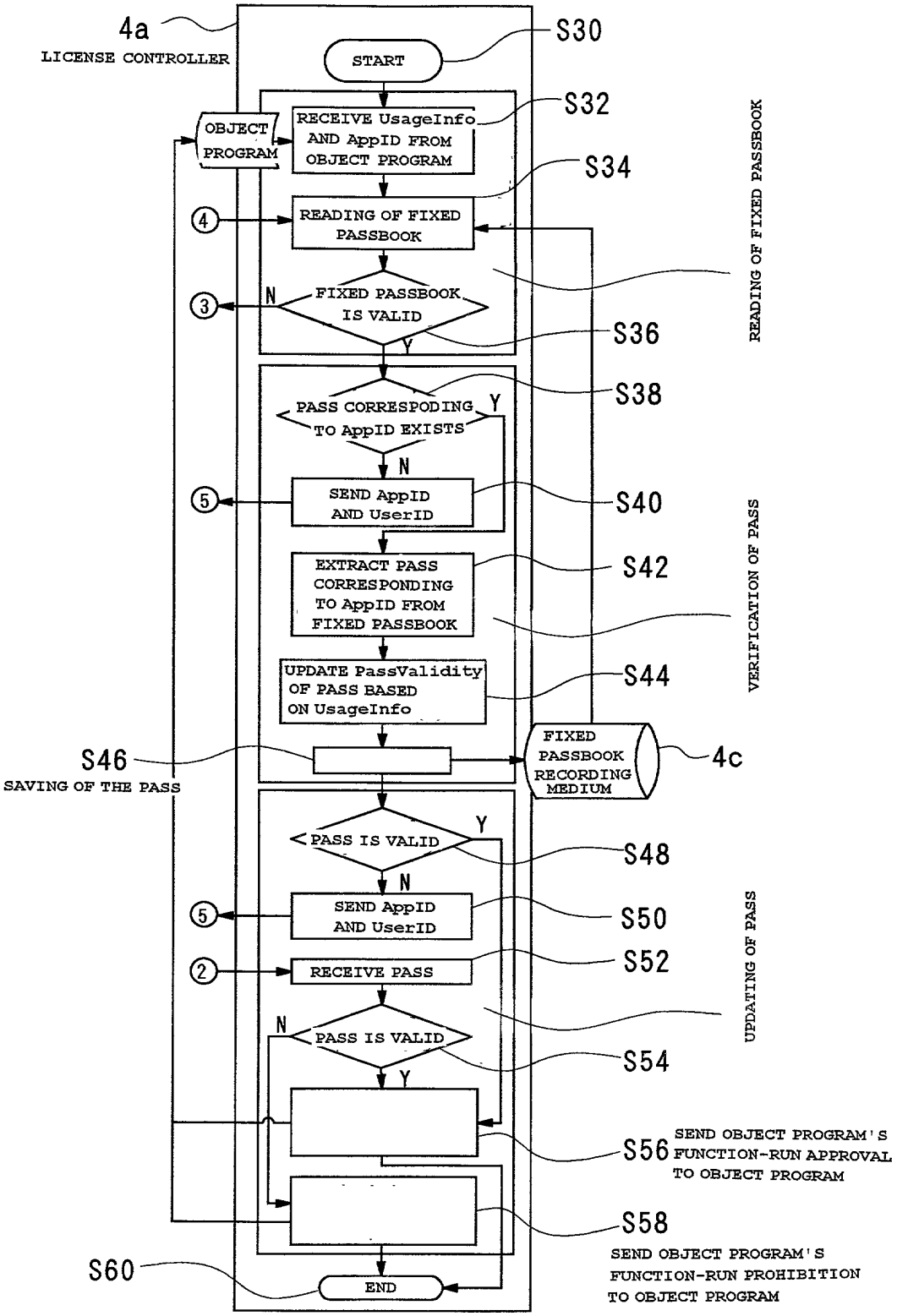

1
SUPPLIER TERMINAL
1a
LICENSE MENU MANAGER
START
S10
OBTAIN AppID
S14
INPUT OF AppID BY SUPPLIER
S12
READ LicenseMenu CORRESPONDING TO AppID
S16
3c
AppInfo DATABASE
S18
OUTPUT LicenseMenu
DISPLAY
M
OBTAIN UPDATE DATA
S22
INPUT OF UPDATE DATA BY SUPPLIER
S20
UPDATE LicenseMenu BASED ON UPDATE DATA
S24
SAVE LicenseMenu
S26
CREATION/UPDATING OF LicenseMenu
END
S28

Fig.7


4a
LICENSE CONTROLLER
START
S30
OBJECT PROGRAM
RECEIVE UsageInfo AND AppID FROM OBJECT PROGRAM
S32
S34
READING OF FIXED PASSBOOK
READING OF FIXED PASSBOOK
FIXED PASSBOOK IS VALID
N
Y
S36
PASS CORRESPODING TO AppID EXISTS
Y
N
S38
SEND AppID AND UserID
S40
EXTRACT PASS CORRESPONDING TO AppID FROM FIXED PASSBOOK
S42
VERIFICATION OF PASS
UPDATE PassValidity OF PASS BASED ON UsageInfo
S44
FIXED PASSBOOK RECORDING MEDIUM
4c
S46
SAVING OF THE PASS
PASS IS VALID
Y
N
S48
SEND AppID AND UserID
S50
RECEIVE PASS
S52
PASS IS VALID
N
Y
S54
UPDATING OF PASS
S56
SEND OBJECT PROGRAM'S FUNCTION-RUN APPROVAL TO OBJECT PROGRAM
S58
SEND OBJECT PROGRAM'S FUNCTION-RUN PROHIBITION TO OBJECT PROGRAM
S60
END

(a)

FIXED PASSBOOK				
USER ID	PASS	APPLICATION ID	PASS VALIDITY	
			PASS STATUS	PASS REMAINING AMOUNT
3	1	a-1	VALID	-(PERPETUAL)
	2	c-1	VALID	START DATE AND TIME,END DATE AND TIME
	3	b-1	INVALID	-
	4	e-1	VALID	REMAINING NUMBER OF TIMES=0 TIMES

(b)

PORTABLE PASSBOOK				
USER ID	PORTABLE PASS	APPLICATION ID	PASS VALIDITY	
			PASS STATUS	PASS REMAINING AMOUNT
3	1	a-1	VALID	-(PERPETUAL)

(c)

PORTABLE PASSBOOK				
USER ID	PORTABLE PASS	APPLICATION ID	PASS VALIDITY	
			PASS STATUS	PASS REMAINING AMOUNT
3	1	a-1	CURRENTLY BEING MOVED	-(PERPETUAL)

(d)

PORTABLE PASSBOOK				
USER ID	PORTABLE PASS	APPLICATION ID	PASS VALIDITY	
			PASS STATUS	PASS REMAINING AMOUNT
3	1	a-1	INVALID	-(PERPETUAL)

Fig.8

Fig.9

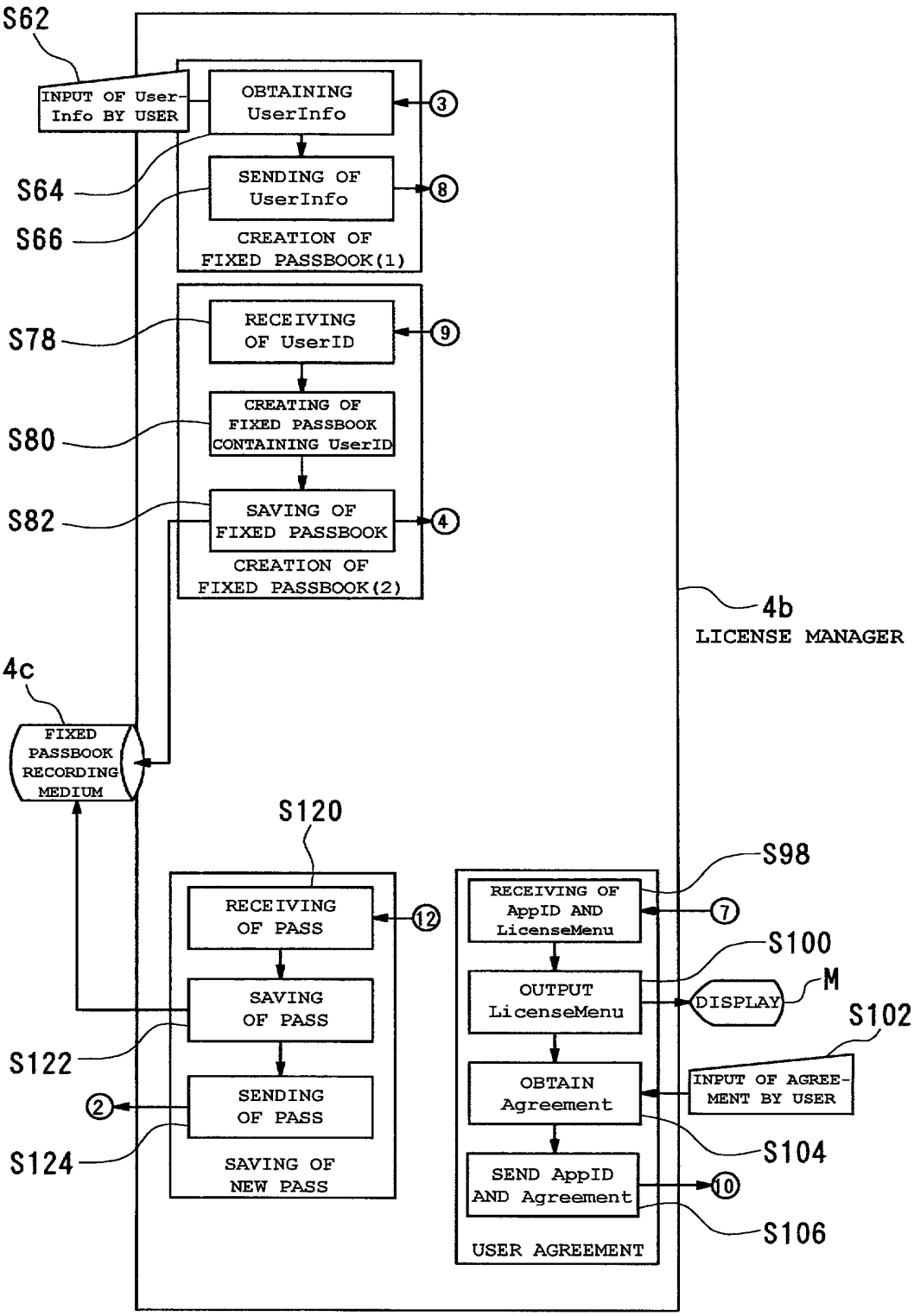

S62
INPUT OF User-Info BY USER
OBTAINING UserInfo
3
S64
SENDING OF UserInfo
8
S66
CREATION OF FIXED PASSBOOK(1)
S78
RECEIVING OF UserID
9
S80
CREATING OF FIXED PASSBOOK CONTAINING UserID
S82
SAVING OF FIXED PASSBOOK
4
CREATION OF FIXED PASSBOOK(2)
4b
LICENSE MANAGER
4c
FIXED PASSBOOK RECORDING MEDIUM
S120
RECEIVING OF PASS
12
SAVING OF PASS
S122
SENDING OF PASS
2
S124
SAVING OF NEW PASS
S98
RECEIVING OF AppID AND LicenseMenu
7
S100
OUTPUT LicenseMenu
DISPLAY
M
S102
INPUT OF AGREE-MENT BY USER
OBTAIN Agreement
S104
SEND AppID AND Agreement
10
S106
USER AGREEMENT

Fig.10

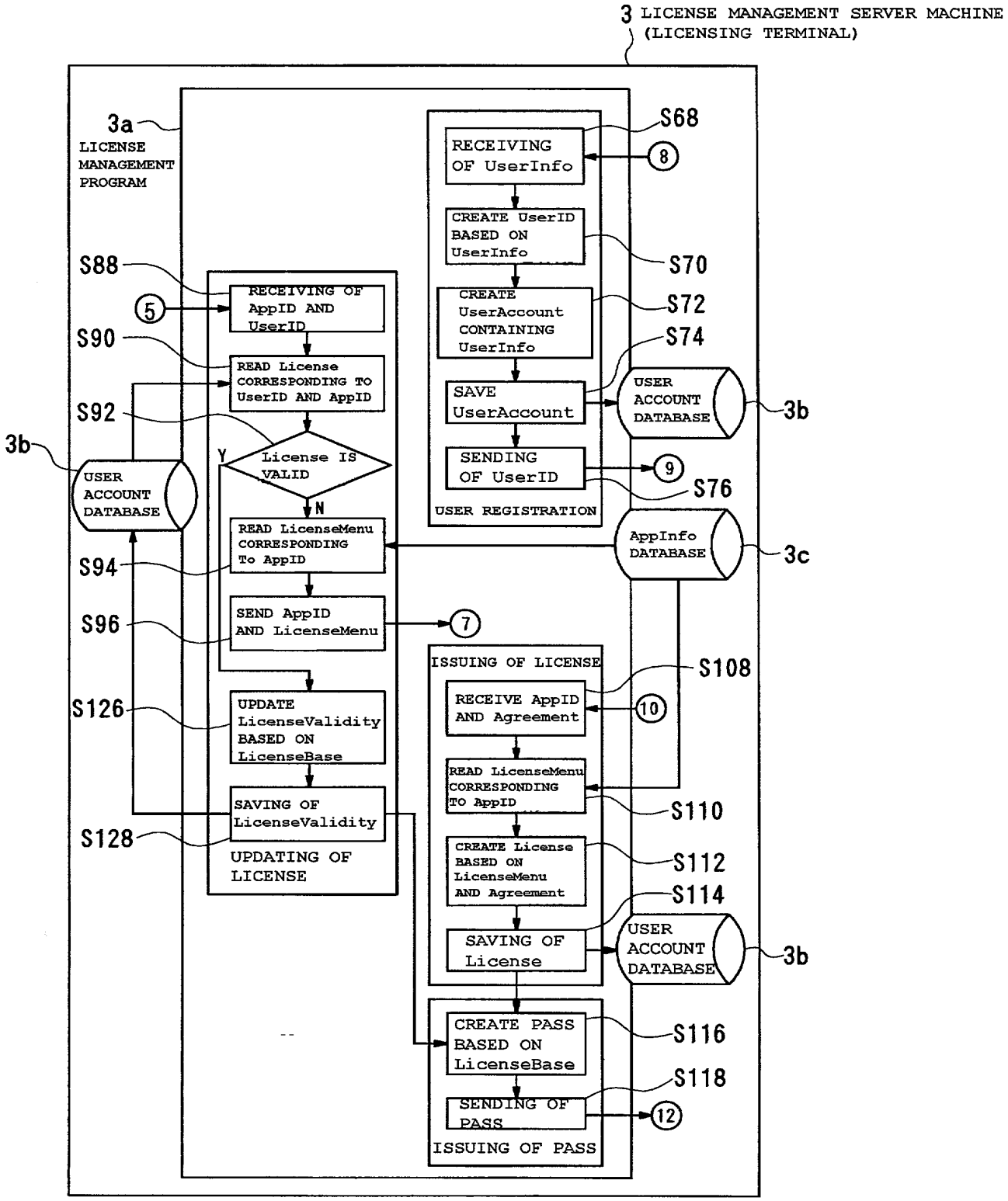

3 LICENSE MANAGEMENT SERVER MACHINE (LICENSING TERMINAL)
3a LICENSE MANAGEMENT PROGRAM
S68
RECEIVING OF UserInfo
8
CREATE UserID BASED ON UserInfo
S70
CREATE UserAccount CONTAINING UserInfo
S72
S74
SAVE UserAccount
USER ACCOUNT DATABASE
3b
SENDING OF UserID
9
S76
USER REGISTRATION
AppInfo DATABASE
3c
S88
5
RECEIVING OF AppID AND UserID
S90
READ License CORRESPONDING TO UserID AND AppID
S92
3b
USER ACCOUNT DATABASE
Y
License IS VALID
N
READ LicenseMenu CORRESPONDING To AppID
S94
SEND AppID AND LicenseMenu
S96
7
UPDATE LicenseValidity BASED ON LicenseBase
S126
SAVING OF LicenseValidity
S128
UPDATING OF LICENSE
ISSUING OF LICENSE
S108
RECEIVE AppID AND Agreement
10
READ LicenseMenu CORRESPONDING TO AppID
S110
CREATE License BASED ON LicenseMenu AND Agreement
S112
S114
SAVING OF License
USER ACCOUNT DATABASE
3b
CREATE PASS BASED ON LicenseBase
S116
S118
SENDING OF PASS
12
ISSUING OF PASS

Fig.11

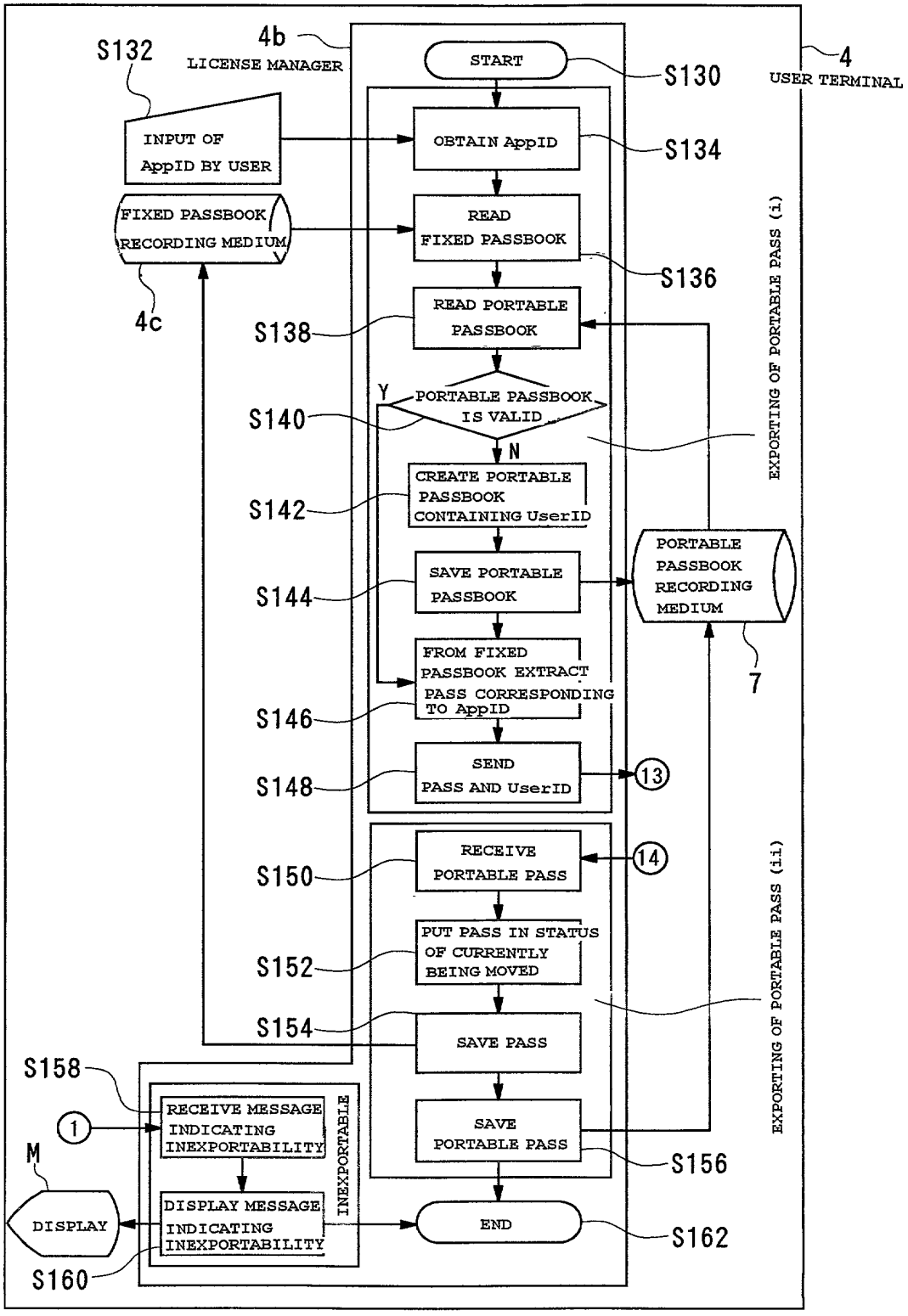

4b
LICENSE MANAGER
4
USER TERMINAL
START
S130
S132
INPUT OF AppID BY USER
OBTAIN AppID
S134
FIXED PASSBOOK RECORDING MEDIUM
READ FIXED PASSBOOK
S136
4c
READ PORTABLE PASSBOOK
S138
Y
PORTABLE PASSBOOK IS VALID
S140
N
CREATE PORTABLE PASSBOOK CONTAINING UserID
S142
SAVE PORTABLE PASSBOOK
S144
PORTABLE PASSBOOK RECORDING MEDIUM
7
FROM FIXED PASSBOOK EXTRACT PASS CORRESPONDING TO AppID
S146
SEND PASS AND UserID
S148
13
EXPORTING OF PORTABLE PASS (i)
RECEIVE PORTABLE PASS
S150
14
PUT PASS IN STATUS OF CURRENTLY BEING MOVED
S152
SAVE PASS
S154
EXPORTING OF PORTABLE PASS (ii)
S158
RECEIVE MESSAGE INDICATING INEXPORTABILITY
1
INEXPORTABLE
M
DISPLAY
DISPLAY MESSAGE INDICATING INEXPORTABILITY
S160
SAVE PORTABLE PASS
S156
END
S162

Fig.12

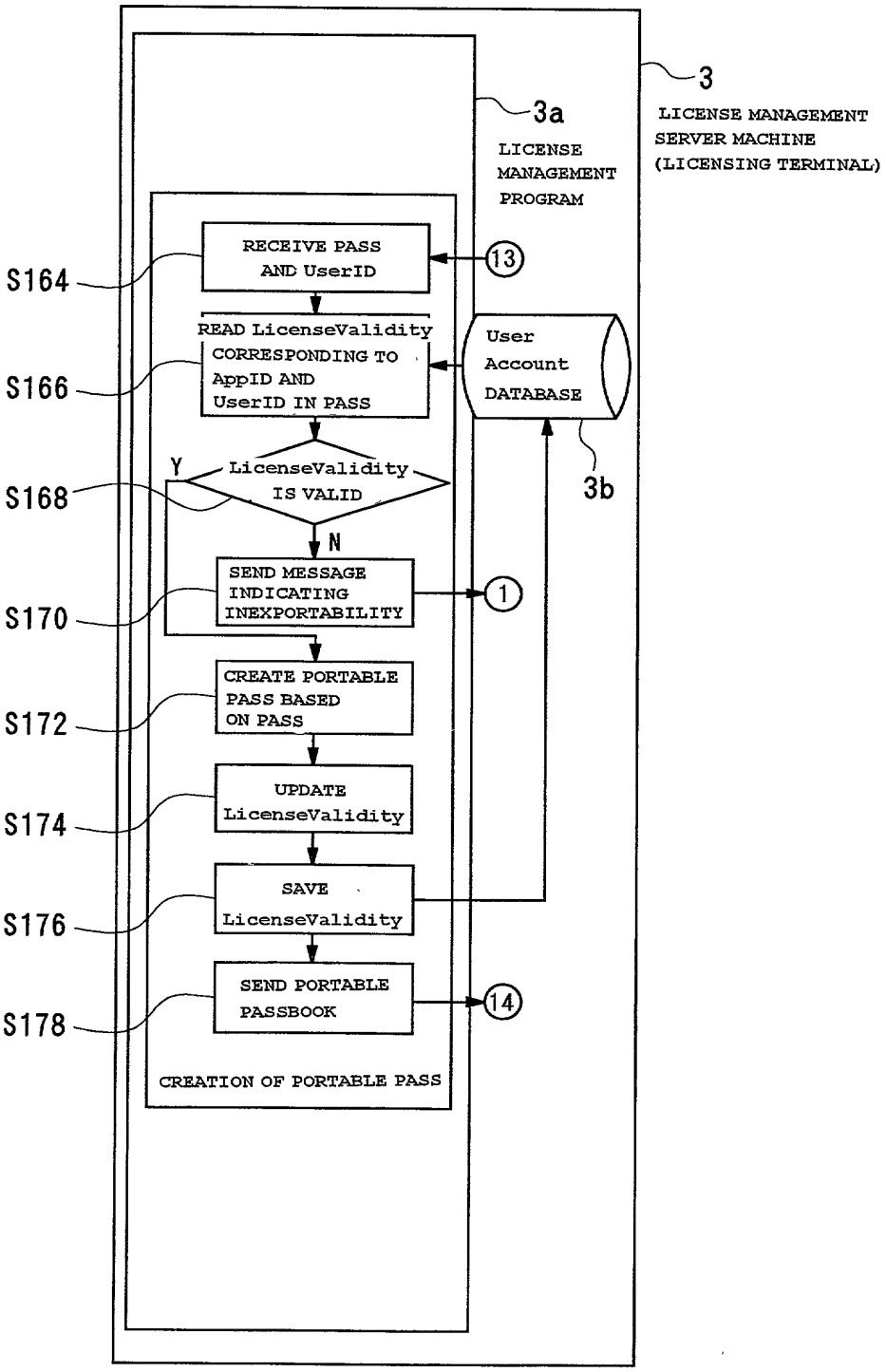

3
LICENSE MANAGEMENT SERVER MACHINE (LICENSING TERMINAL)
3a
LICENSE MANAGEMENT PROGRAM
RECEIVE PASS AND UserID
13
S164
READ LicenseValidity CORRESPONDING TO AppID AND UserID IN PASS
User Account DATABASE
3b
S166
Y
LicenseValidity IS VALID
S168
N
SEND MESSAGE INDICATING INEXPORTABILITY
1
S170
CREATE PORTABLE PASS BASED ON PASS
S172
UPDATE LicenseValidity
S174
SAVE LicenseValidity
S176
SEND PORTABLE PASSBOOK
14
S178
CREATION OF PORTABLE PASS

Fig.13

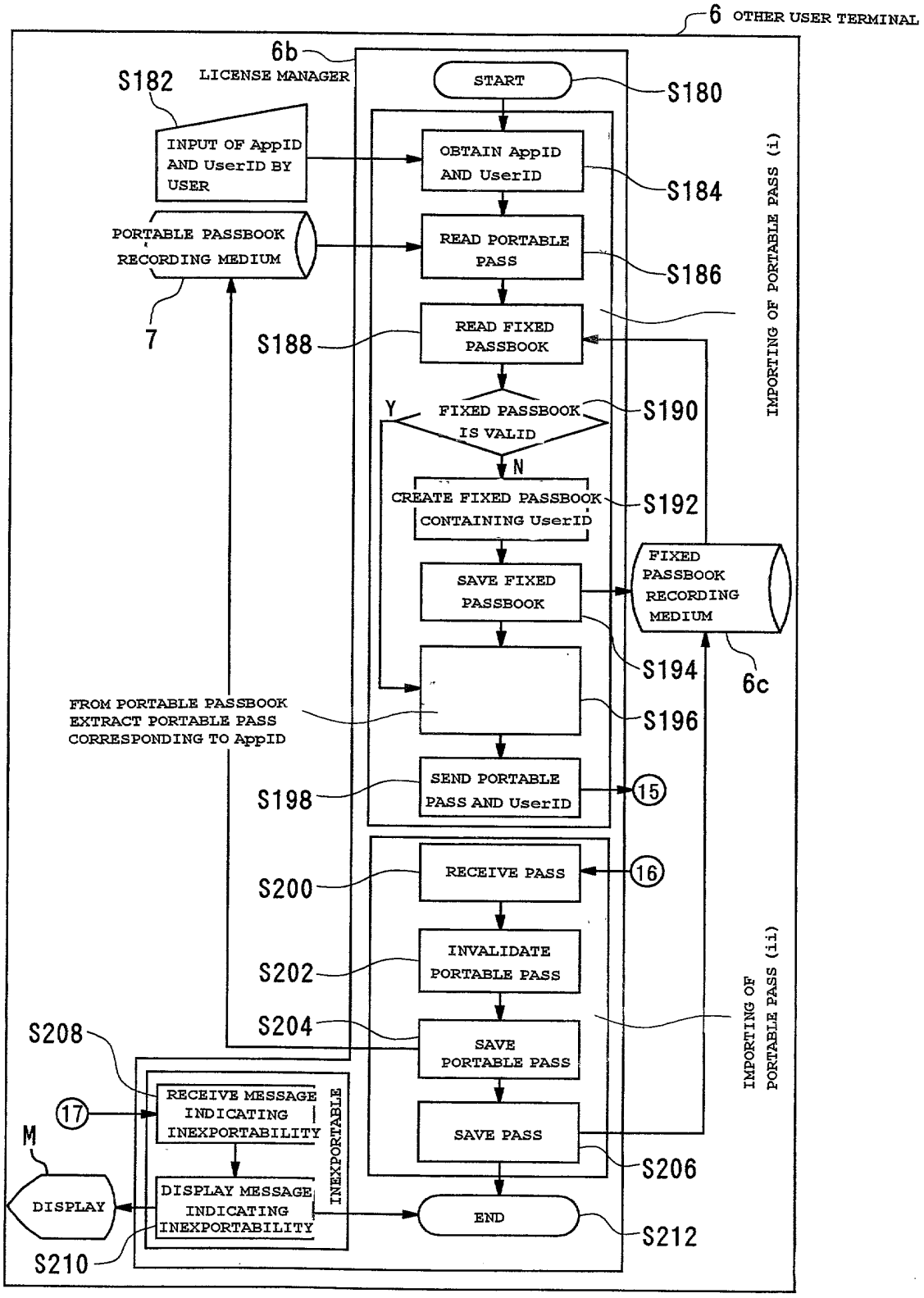
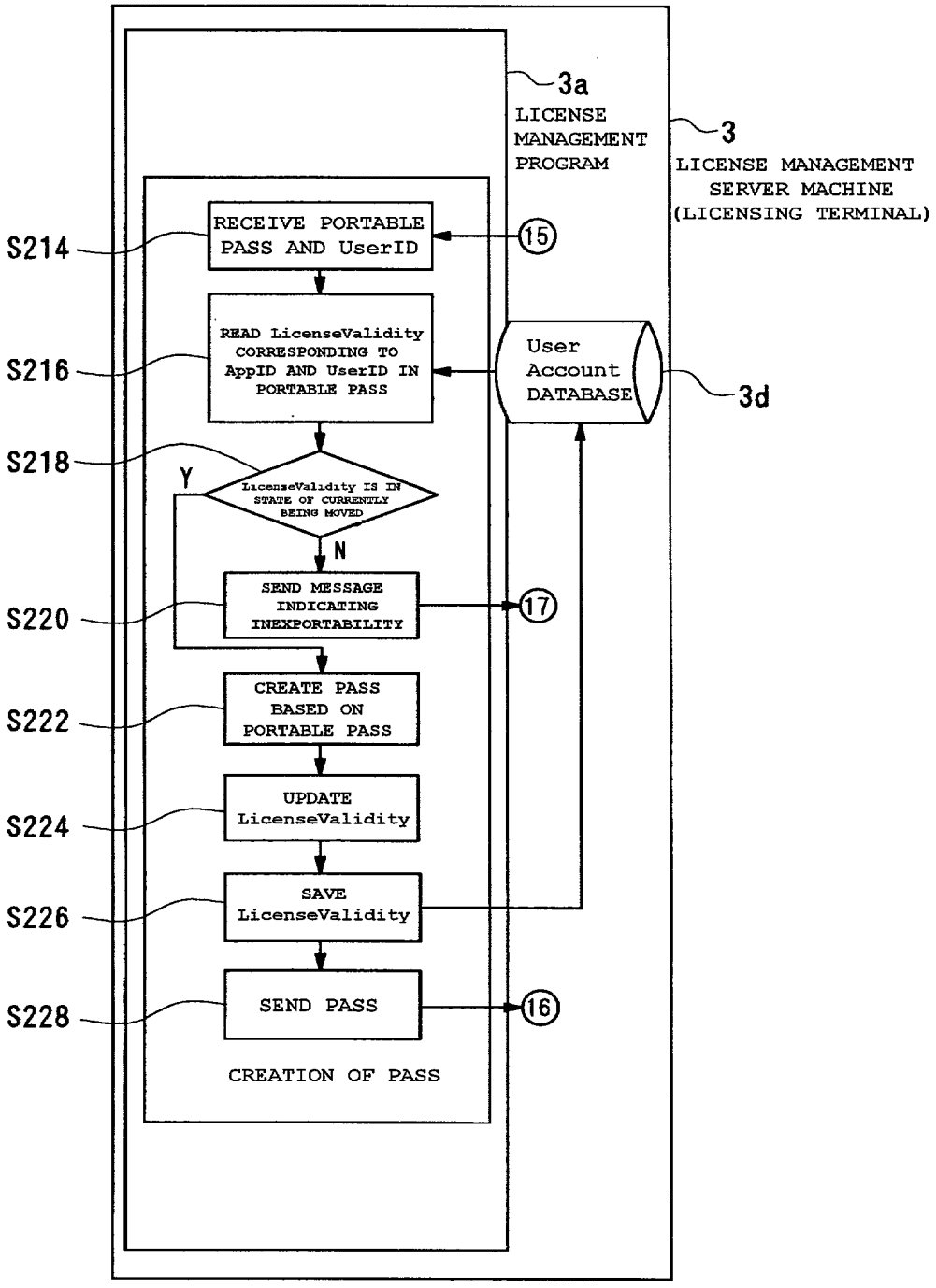

6 OTHER USER TERMINAL
6b LICENSE MANAGER
S182
INPUT OF AppID AND UserID BY USER
PORTABLE PASSBOOK RECORDING MEDIUM
7
START
S180
OBTAIN AppID AND UserID
S184
READ PORTABLE PASS
S186
READ FIXED PASSBOOK
S188
FIXED PASSBOOK IS VALID
S190
Y
N
CREATE FIXED PASSBOOK CONTAINING UserID
S192
SAVE FIXED PASSBOOK
FIXED PASSBOOK RECORDING MEDIUM
6c
S194
FROM PORTABLE PASSBOOK EXTRACT PORTABLE PASS CORRESPONDING TO AppID
S196
SEND PORTABLE PASS AND UserID
S198
15
IMPORTING OF PORTABLE PASS (i)
RECEIVE PASS
16
S200
INVALIDATE PORTABLE PASS
S202
S204
SAVE PORTABLE PASS
SAVE PASS
S206
IMPORTING OF PORTABLE PASS (ii)
S208
RECEIVE MESSAGE INDICATING INEXPORTABILITY
17
M
DISPLAY
DISPLAY MESSAGE INDICATING INEXPORTABILITY
INEXPORTABLE
S210
END
S212

Fig.14


3a
LICENSE MANAGEMENT PROGRAM
3
LICENSE MANAGEMENT SERVER MACHINE (LICENSING TERMINAL)
S214
RECEIVE PORTABLE PASS AND UserID
15
S216
READ LicenseValidity CORRESPONDING TO AppID AND UserID IN PORTABLE PASS
User Account DATABASE
3d
S218
LicenseValidity IS IN STATE OF CURRENTLY BEING MOVED
Y
N
S220
SEND MESSAGE INDICATING INEXPORTABILITY
17
S222
CREATE PASS BASED ON PORTABLE PASS
S224
UPDATE LicenseValidity
S226
SAVE LicenseValidity
S228
SEND PASS
16
CREATION OF PASS